

REMARKS

Claims 1–16 were currently pending in this Application. Claims 2, 4 and 9–14 have been canceled herein without prejudice or disclaimer and claims 1 and 8 have been amended. Applicant submits that no new matter has been added and respectfully requests reconsideration of this Application in view of the foregoing amendments and the following remarks.

Response To Claim Rejections – 35 U.S.C. § 103

Claims 1–4, 6–11 and 13–14 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Takeo, U.S. Patent Appl. No. 2002/0062075 A1, in view of Shiratani et al., U.S. Patent No. 6,418,238 (“Shiratani”). Claims 5, 12 and 15–16 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Takeo in view of Shiratani as applied to claims 1 and 8 above, and further in view of Acharya et al., U.S. Patent No. 6,094,508 (“Acharya”). Claims 2, 4 and 9–14 have been canceled herein without prejudice or disclaimer, thereby rendering the rejection of these particular claims moot. Applicant respectfully submits that remaining pending claims 1, 3, 5–8 and 15–16 are patentable over the cited references in view of the foregoing amendments and the following remarks.

Amended claim 1 recites, in pertinent part, “an enhancement unit configured to enhance a circular shadow existing in an image by enhancing a pixel value gradient of the circular shadow while suppressing an overall pixel value gradient of the image.” Similarly, amended claim 8 recites, in pertinent part, “an enhancement step of enhancing a circular shadow existing in an image by enhancing a pixel value gradient of the circular shadow while

suppressing an overall pixel value gradient of the image.” Takeo does not teach or suggest enhancing “a circular shadow existing in an image by enhancing a pixel value gradient of the circular shadow while suppressing an overall pixel value gradient of the image.” Takeo merely teaches calculating and evaluating the degree of convergence of gradient vectors to distinguish growth shadow P1 from shadows P2 of blood vessels or mammary glands. *See* Takeo, ¶¶ [0069], [0071].

Amended claim 1 further recites, in pertinent part, “an extraction unit configured to extract an isolated shadow from the image enhanced by said enhancement unit by using a disk shaped morphological filter and a ring shaped morphological filter.” Similarly, amended claim 8 also further recites, in pertinent part, “an extraction step of extracting an isolated shadow from the image enhanced by said enhancement unit by using a disk shaped morphological filter and a ring shaped morphological filter.” While the Office Action dated September 6, 2007 (“Office Action”) states that Takeo does not disclose “an extraction unit configured to extract an isolated shadow,” it asserts that Shiratani discloses such an extraction unit and that it would have been obvious to a person having ordinary skill in the art to use the Shiratani extraction unit in the Takeo apparatus. *See* Office Action, 9/6/07, p. 3. Shiratani does not, however, teach or suggest extracting “an isolated shadow from the image enhanced by said enhancement unit using a disk shaped morphological filter and a ring shaped morphological filter.” Shiratani merely teaches discriminating and extracting a target roundish shape from a linear region or a background. *See* Shiratani, col. 3, ll. 40–45. That is, Shiratani does not remedy the above-identified deficiencies of Takeo.

Accordingly, neither of the cited references, taken alone or in combination, teach or suggest each of the claimed limitations of amended independent claims 1 and 8 as required for establishing a *prima facie* case of obviousness. See MPEP § 2143.

The rejection of claims 5 and 15–16 are based on the same proposed combination of Takeo and Shiratani in view of a third reference, Archarya. These claims depend directly from amended independent claims 1 and 8. Accordingly, for at least the reasons set forth above with regard to the patentability of claims 1 and 8, Applicant respectfully submits that claims 5 and 15–16 are also patentable over the cited references and in condition for allowance.

For at least the above reasons, Applicant respectfully submits that amended independent claims 1 and 8, and claims 3, 5–7 and 15–16 depending therefrom, are patentable over the cited references and, accordingly, respectfully request withdrawal of the foregoing rejections.

As a result, all of the pending claims are now allowable.

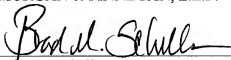
CONCLUSION

Based on the foregoing amendments and remarks, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims and allowance of this Application. In the event that any issues remain that could potentially be resolved by telephone, the Examiner is urged to contact the undersigned at the number indicated below. Should any additional fee(s) be required for the entry of this Amendment, the Commissioner is hereby authorized to charge Deposit Account No. 13-4500, Order No. 1232-5388.

Respectfully submitted,
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